



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,020	09/30/2003	Shigeru Tajima	101175-00036	4534

7590 04/04/2005
ARENT FOX KINTNER PLOTKIN & KAHN, PLLC
Suite 600
1050 Connecticut Avenue, N.W.
Washington, DC 20036-5339

EXAMINER

COLON SANTANA, EDUARDO

ART UNIT PAPER NUMBER

2837

DATE MAILED: 04/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

EK

Office Action Summary	Application No. 10/674,020	Applicant(s) TAJIMA ET AL	
	Examiner Eduardo Colon-Santana	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 6-9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/30/2003</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 9/30/2003 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Masaki et al. U.S. Patent No. 6,456,030.

Referring to claim 1, Masaki et al. describes a motor control device and method for a cylinder type and salient pole type synchronous motor as claimed (see all figures and respective portions of the specification). Masaki et al. further discloses in figure 12, a PM rotary machine (16), inherently having a permanent magnet and an armature respectively in a rotor and a stator. Furthermore, Masaki et al. describes a controller (4) having a magnetic pole position detecting unit (21) receiving a signal from the magnetic pole position

Art Unit: 2837

sensor (23); a current control means (19), including a magnetic pole position calculation means (20), which after detecting (10) and controlling the armature current flowing through the armature, controls the phase of the armature voltage to be applied to the armature depending on the magnetic pole position of the rotor (21), in addition to include a correcting quantity determining means (22), performing a dq vector control process to control the rotary machine (16) in a dq coordinate system wherein the rotor is rotating and the armature current (i_d) is zero, to determine a magnetic pole position correcting quantity (θ) to correct the magnetic pole position detected (θ_1) so that a d-axis voltage command value (7, 8) determined by the dq vector control process will be zero (see figures 1, 5, 9, 12, 17-21 and Col. 11-15).

As to claim 2, Masaki et al. discloses in figures (1, 5, 9 and 12), items (14, 15, 17 and 22) respectively in a similar process in which the magnetic pole position correcting quantity means determines the true value according to a predetermined equation based on a d-axis voltage and a q-axis voltage command value which are determined when the dq vector control process is performed.

Referring to claim 3, Masaki et al. discloses a alternative in which the dq vector control process can be employed having a plurality of values to detect the magnetic pole position by a samplings of a few times (see Col. 12, lines 63-67).

As to claims 4 and 5, Masaki et al. discloses that the embodiments explained are preferable for a control in which the synchronous motor 1 is rotated above a predetermined rotating speed or

under a low speed even a (constant speed) including stoppage (see Col. 16-22).

Allowable Subject Matter

4. Claims 6-9 are objected to as being dependent upon a rejected base claim, but would be allowable if incorporated in the independent claim from which they depend including all of the limitations of the base claim and any intervening claims.

Conclusion

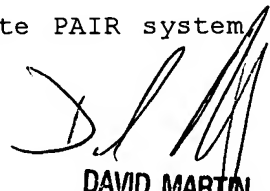
5. The prior art made of record in form 892 and not specifically relied upon is considered pertinent to applicant's disclosure to further show the state of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eduardo Colon-Santana whose telephone number is (571) 272-2060. The examiner can normally be reached on Monday thru Thursday 6:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Martin can be reached on (571) 272-2800 X.37. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center at 866-217-9197.

ECS
March 30, 2005


DAVID MARTIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800